

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:)
Richard W. Gross et al.) Group Art Unit: **2662 (expected)**
New Divisional Application based on Serial) Examiner: **Ahmed Elallam (expected)**
No. 10/189,212
Filed: **July 7, 2003**)
For: ***Splitterless Multicarrier Modem***)

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

July 7, 2003

Sir:

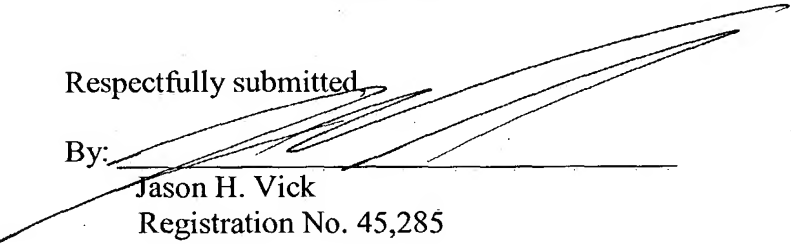
In accordance with the duty of disclosure as set forth in 37 C.F.R. §1.56, Applicants hereby submit the following information in conformance with 37 C.F.R. §§ 1.97 and 1.98. Pursuant to 37 C.F.R. § 1.98, a copy of each of the documents cited is enclosed.

The documents are being submitted within three (3) months of the filing of this application or entry into the national stage of this application, or before the first Office Action on the merits, whichever is later, therefore no fee or certification is required under 37 C.F.R. § 1.97(b).

It is requested that the accompanying information disclosure statement be considered and made of record in the above-captioned application. To assist the Examiner, the documents are listed on the attached form PTO-1449. It is respectfully requested that an Examiner initialed copy of this form be returned to the undersigned.

Respectfully submitted,

By:


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U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>				Complete if Known			
				Application Number		New Divisional Application based on USSN: 10/189,212	
				Filing Date		July 7, 2003	
				First Named Inventor		Richard W. Gross et al.	
				Group Art Unit		2662 (expected)	
				Examiner Name		Ahmed Elallam (expected)	
Sheet	1	of	5	Attorney Docket Number		081513-329	

U.S. PATENT DOCUMENTS						
Examiner Initials [*]	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
		3,573,380		Darlington	04/06/1971	
		4,131,766		Narasimha	12/26/1978	
		4,568,156		Dane	02/04/1986	
		4,679,227		Hughes-Hartogs	07/07/1987	
		4,731,816		Hughes-Hartogs	03/15/1988	
		4,802,190		Schouhamer Immink	01/31/1989	
		4,912,763		Galand et al.	03/27/1990	
		5,048,054		Eyuboglu et al.	09/10/1991	
		5,128,964		Mallory	07/07/1992	
		5,206,886		Bingham	04/27/1993	

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Examiner Initials [*]	Cite No. ¹	Foreign Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Office ³	Number ⁴ Kind Code ⁵ (if known)				
			EP 0 473 465 B1 ✓		03/04/1992		
			EP 0 652 677 A2 ✓		05/10/1995		
			EP 0 703 685 A2 ✓		03/27/1996		
			EP 0 753 947 A1 ✓		01/15/1997		
			EP 0 762 701 A2 ✓		03/12/1997		

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials [*]	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		John A. C. Bingham (May 1990), "Multicarrier Modulation For Data Transmission: An Idea Whose Time Has Come," <u>IEEE Communications Magazine</u> , pp. 5-14.	✓
		Shoham et al. (September 1988), "Efficient Bit Allocation for an Arbitrary Set of Quantizers," <u>IEEE Transactions on Acoustics, Speech and Signal Processing</u> , 36(9): 1445-1453.	✓

Examiner Signature	Date Considered
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

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		Number	Kind Code ² (if known)			
		5,285,474		Chow et al.	02/08/1994	
		5,327,574		Monma et al.	07/05/1994	
		5,400,322		Hunt et al.	03/21/1995	
		5,428,790		Harper et al.	06/27/1995	
		5,452,288		Rahuel et al.	09/19/1995	
		5,479,447		Chow et al.	12/26/1995	
		5,497,398		Tzannes et al.	03/05/1996	
		5,521,906		Grube et al.	05/28/1996	
		5,533,008		Grube et al.	07/02/1996	
		5,555,244		Gupta et al.	09/10/1996	

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		Office ³	Number ⁴	Kind Code ⁵ (if known)				
			EP 0 812 087	✓ A2		12/10/1997		
			EP 0 820 168	✓ A2		01/21/1998		
			EP 0 840 474	✓ A2		05/06/1998		
			EP 0 905 948	✓ A2		03/31/1999		
			WO 86/07223	✓		12/04/1986		

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS				
Examiner Initials [*]	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		T ²
		John M. Cioffi “A Multicarrier Primer,;” <u>Amati Communications Corporation and Stanford University</u> , pp.1-18.	✓	
		John A. C. Bingham (May 1996), “RFI Suppression in Multicarrier Transmission Systems,” Amati Communications, <u>IEEE Communications Magazine</u> , pp. 1026-1030.	✓	

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		Number	Kind Code ² (if known)			
		5,596,604		Cioffi et al.	01/21/1997	
		5,598,435		Williams	01/28/1997	
		5,625,651		Cioffi	04/29/1997	
		5,636,246		Tzannes et al.	06/03/1997	
		5,644,573		Bingham et al.	07/01/1997	
		5,673,290		Cioffi	09/30/1997	
		5,731,706		Koeman et al.	03/24/1998	
		5,805,669		Bingel et al.	09/08/1998	
		5,812,599		Van Kerckhove	09/22/1998	
		5,822,372		Emami	10/13/1998	

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		Office ³	Kind Code ⁵ Number ⁴ (if known)				
			WO 97/15131 ✓		04/24/1997		
			WO 98/10556 ✓		03/12/1998		
			WO 98/27665 ✓		06/25/1998		
			WO 98/57472 ✓		12/17/1998		
			WO 98/59476 ✓		12/30/1998		

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		Atungsiri et al. (June 1997), "Multirate Coding for Mobile Communications Link Adaptation," IEEE Proc. Commun., 144(3):211-216. ✓	
		Related Application USSN. 09/597,926 with a copy of Preliminary Amendment as filed.	

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		Number	Kind Code ² (if known)			
		5,822,374		Levin	10/13/1998	
		5,832,387		Bae et al.	11/03/1998	
		5,852,633		Levin et al.	12/1998	
		5,903,608		Chun	05/1999	
		5,933,454		Cioffi	08/03/1999	
		5,960,036		Johnson et al.	09/1999	
		6,005,893		Hyll	12/1999	
		6,014,425		Bingel et al.	01/11/2000	
		6,028,486		Andre	02/22/2000	
		6,052,411		Mueller et al.	04/18/2000	

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		Office ³	Number ⁴ Kind Code ⁵ (if known)			
			WO 99/16224 ✓		09/09/1998	
			WO 99/18701 ✓		04/15/1999	
			JP 60-112357 ✓		06/18/1985	
			JP 62-502932 ✓		11/19/1987	
			JP 11-168515 ✓		06/22/1999	

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		6,055,297		Terry	04/25/2000	
		6,061,392		Bremer et al.	05/09/2000	
		6,065,060		Liu et al.	04/2000	
		6,072,779		Tzannes et al.	06/06/2000	
		6,073,179		Liu et al.	06/06/2000	
		6,092,122		Liu et al.	07/18/2000	
		6,101,216		Henderson et al.	08/08/2000	
		6,128,335		Liu et al.	10/02/2000	
		6,144,696		Shively et al.	11/07/2000	
		6,161,203		Zuranski et al.	12/12/2000	
		6,219,378		Wu	04/17/2001	
		6,229,855 X		Takatori et al.	05/08/2001	

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			JP 7-336274	✓	Nakatsuka Monta	12-22-1995	English Abstract only
			JP 4-22235	✓	Hinokimoto Shinichi	01-27-1992	English Abstract only
			JP 9-51328	✓	Chun You-Sik	02-18-1997	English Abstract only

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